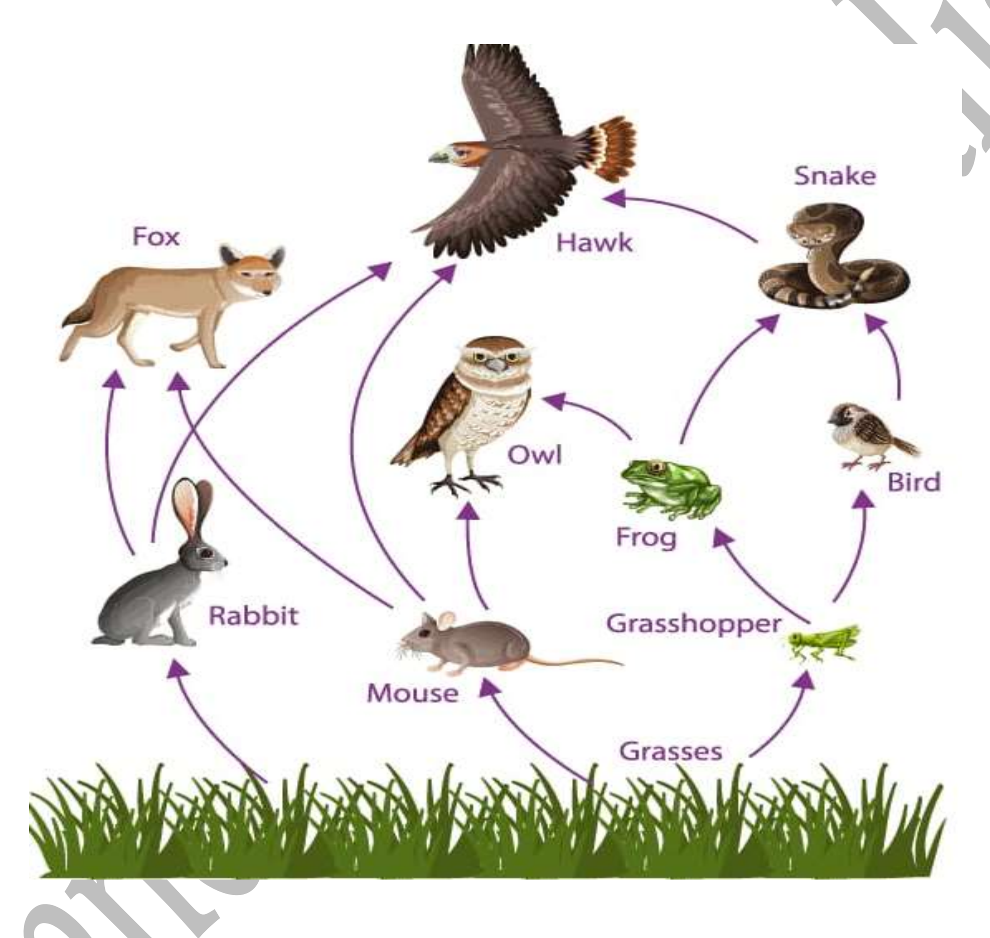
Primary 5

Performance Tasks

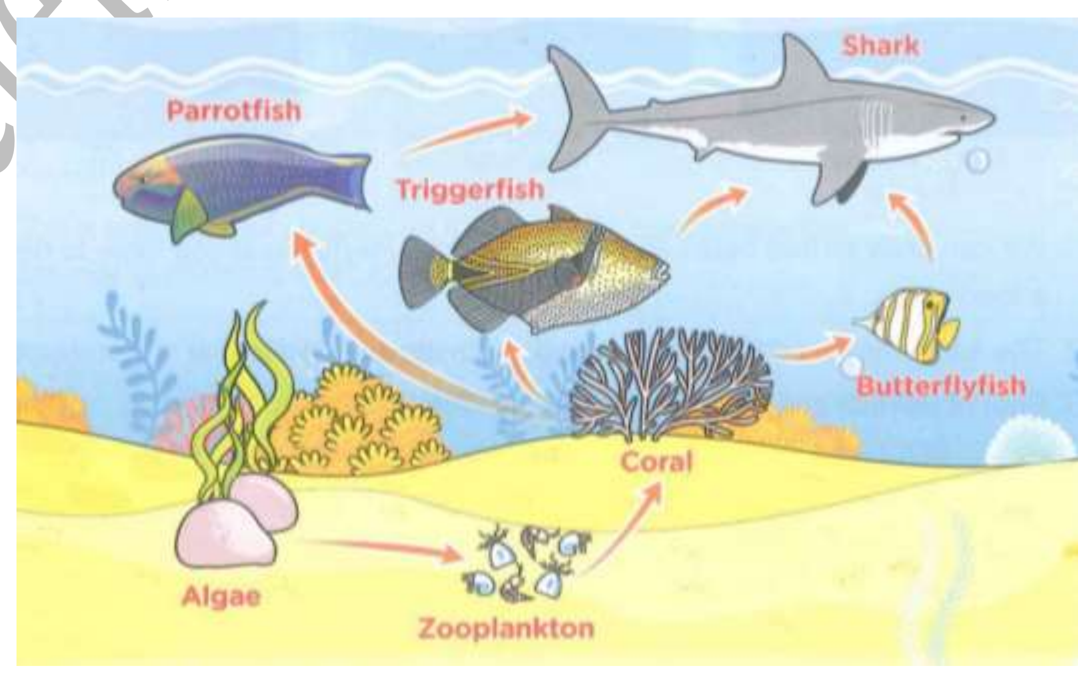
Task 1

Draw two food webs, one on the land and the other in the water

On the land



On the water



Task 2

Understanding the relationship between living organisms

1. Explain how energy is transferred in the ecosystem
2. What happens if one of the living organisms disappeared from the ecosystem

1.Explain how energy is transferred in the ecosystem

1. The producers use the energy from the Sun to make its own food
2. The primary consumer eats the producer
3. The secondary consumer eats the primary consumer
4. The tertiary consumer eats the secondary consumer
5. The decomposer feed on the dead organisms.

2. What happens if one of the living organisms disappeared from the ecosystem

The ecosystem will be affected and many consumers will die or extinct

Task 3

Design an ecosystem and determine the producers, consumers and decomposers



Non living organisms: soil and water
Producers: plants
Consumers: fish
Decomposers: earthworms, bacteria in the soil

Task 4

Explain how the sand was used to move very large blocks of stones from the point of view of scientists and historians

- **Scientists**

One of the ancient Egyptian walls drawing shows that they move huge things in by adding water to sand to make sand easy move by decrease friction force

- **Historians**

They believe that this drawing was holy ceremony

Task 5

Does adding water to the sand make the sand more slippery?

Write your hypothesis and your evidence

Hypothesis:

Adding water to sand makes it more slippery so it can be used to move large blocks of stones such as the pyramids

Evidence:

Steps:

1. Put a heavy box on a dried sand and tie it with a rope
2. Try to pull the box above the sand and record your results
3. Add water to the sand then try to pull the box, record your results

Observation:

1. Sand particles are rough but when water is added to sand its particles stick together
2. After adding water, we were able to move the box easily

Conclusion:

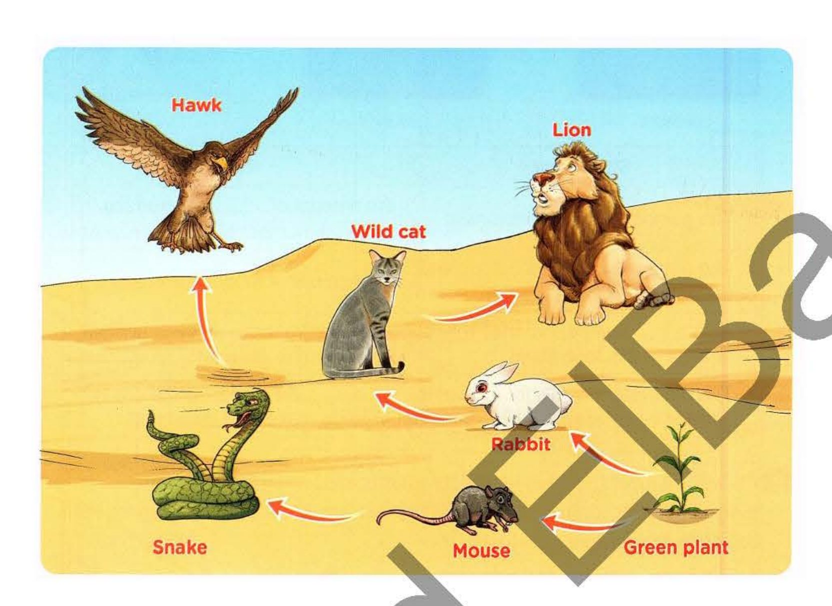
- Adding water to sand makes it more slippery so it can be used to move large blocks of stones such as the pyramids

Task 1

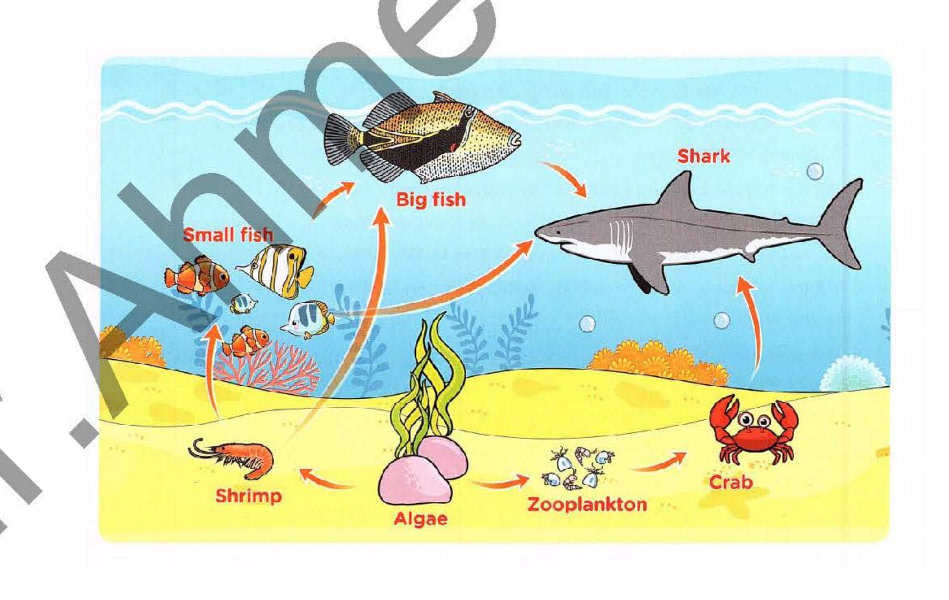
Task 1: Draw two food webs, one on the land and the other in the water

Answer

1 - On the land :



2 - In the Water :



Task 2

Understanding the relationship between living organisms

A) Explain how energy is transferred in the ecosystem

B) What happens if one of the living organisms disappeared from the ecosystem

Answer

A) Explain how energy is transferred in the ecosystem

1. The energy from the Sun help producer to make its own food
2. The primary consumer eats the producer
3. the secondary consumer eats the primary consumer
4. the tertiary consumer eats the secondary consumer
5. finally , the decomposer feed on the died organisms

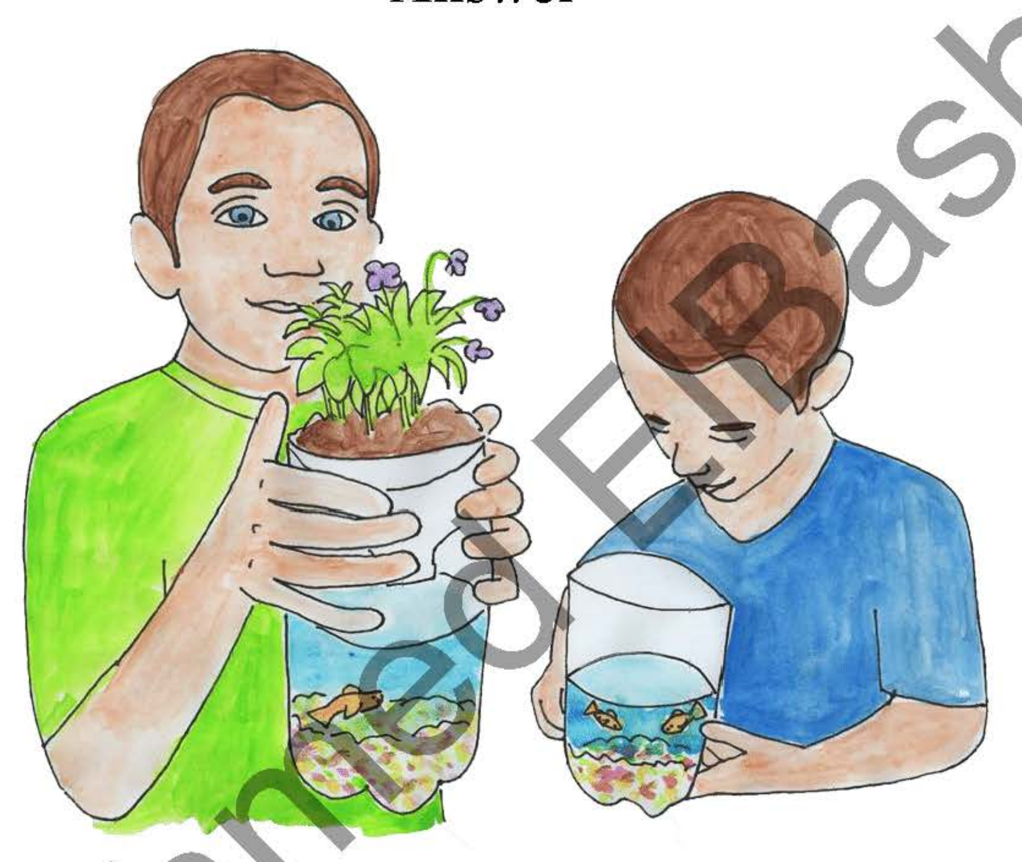
B) What happens if one of the living organisms disappeared from the ecosystem

The ecosystem will be affected and many consumers will disappear

Task 3

Design an ecosystem and determine the producers, consumers and decomposers

Answer



Plants : Producer

Fish : Consumer

Bacteria in the soil : decomposer



Task 4

Explain how the sand was used to move very large blocks of stones from the point of view of scientists and historians

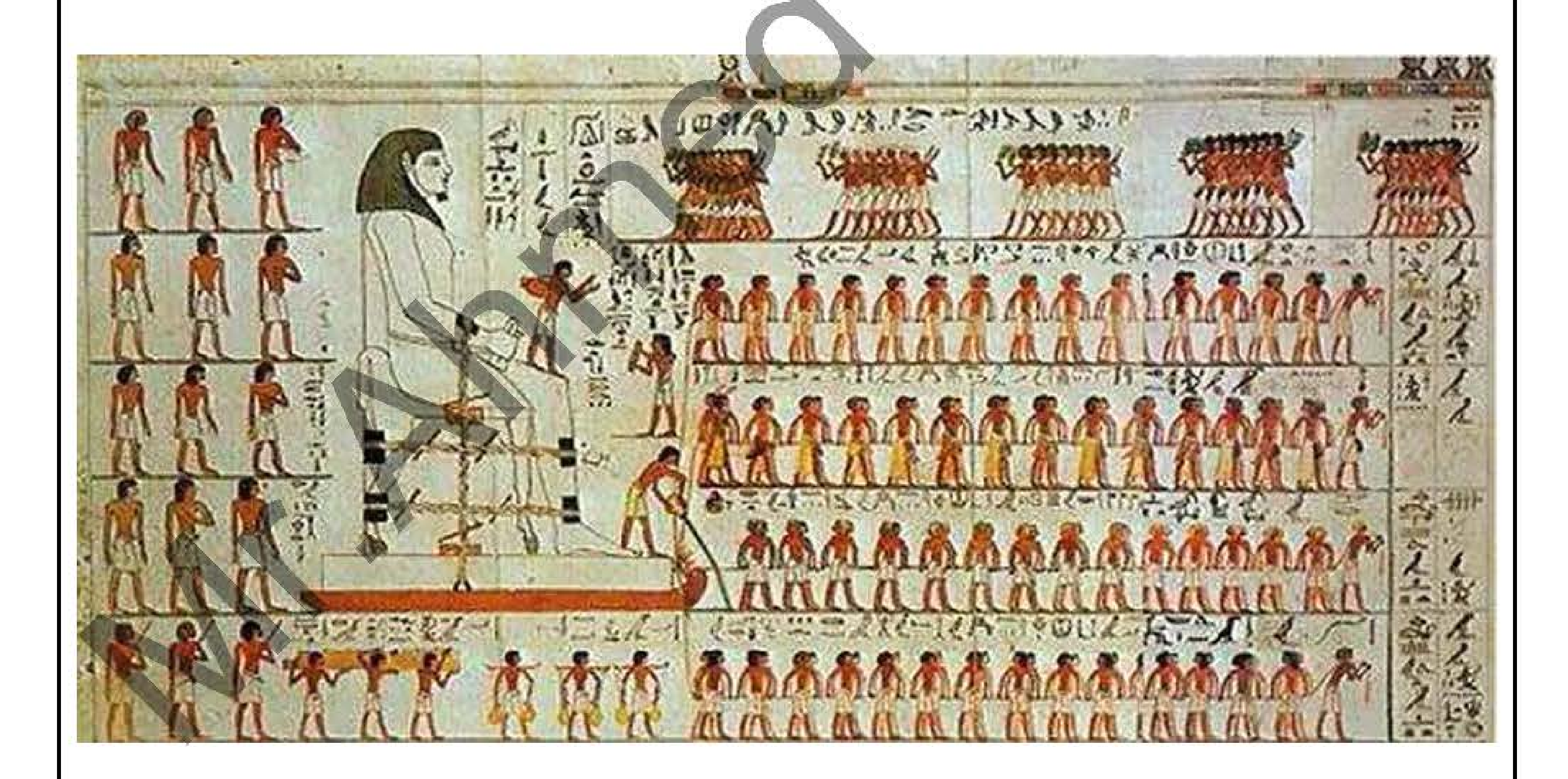
Answer

Scientists :

One of the ancient Egyptian wall drawing shows that they move huge things in by adding water to sand to make sand easy to move and more slippery

Historians :

They believe that this drawing was holy ceremony



Task 5

Does adding water to the sand make the sand more slippery? Write your hypothesis and your evidence

Answer

Hypothesis :

If you pour water on the sand, the water seems to disappear into the sand. It doesn't actually disappear but enters the pores between sand



Evidence :

Steps

3· Add water to the sand inside a balloon

Observation

sand particles come close and stick together

• Conclusion

Adding water to sand makes it more slippery

stones

Performance tasks Science Grade 5

Mr Brain Academy

Dr Nada

01069752133

Task 1: Draw two food webs, one on the land and the other in the water

A-On land

B- In water

Task 2 Understanding the relationship between living organisms

A) Explain how energy is transferred in the ecosystem
B) What happens if one of the living organisms disappeared from the ecosystem

Task 3

Design an ecosystem and determine the producers, consumers and decomposers

Task 4 the theory of building pyramids

Explain how the sand was used to move very large blocks of stones from the point of view of scientists and historians

Task 5 Discussing the research steps

Does adding water to the sand make the sand more slippery? Write your hypothesis and your evidence

Performance tasks Science Grade 5

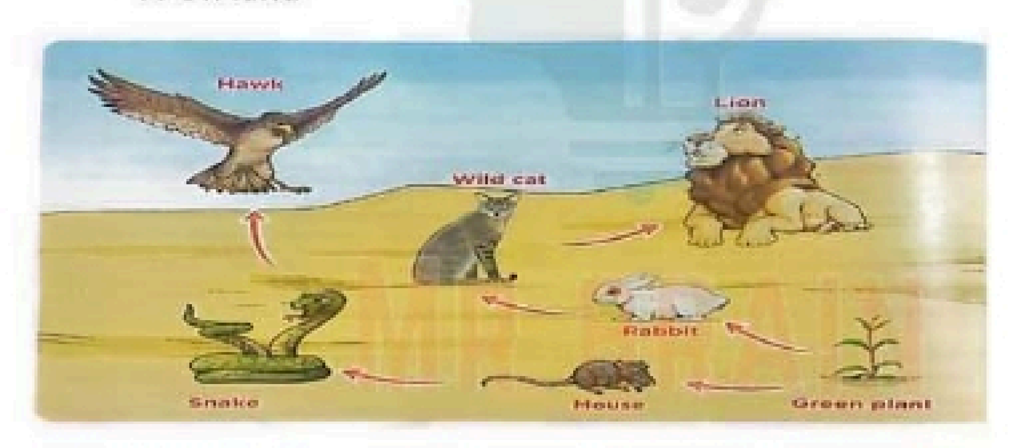
Mr Brain Academy

Dr Nada

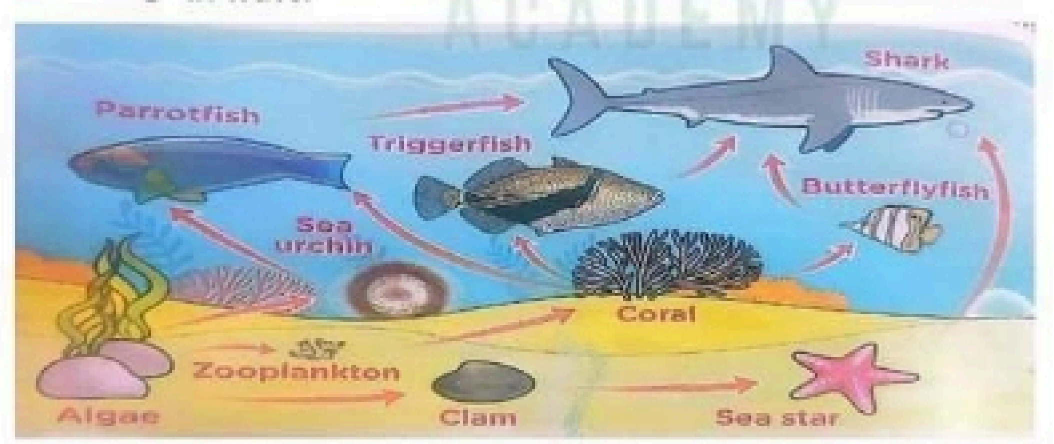
01069752133

Task 1: Draw two food webs, one on the land and the other in the water

A-On land



B- In water



Task 2 Understanding the relationship between living organisms

A) Explain how energy is transferred in the ecosystem

1- Producers (Plants) use the solar energy to make their own food in the form of glucose sugar

2- Energy transfers from producers to consumers and when the consumers die, the decomposers decompose the consumers and return their energy and nutrients back to the soil

B) What happens if one of the living organisms disappeared from the ecosystem

The whole ecosystem will be affected, and many organisms may die or extinct

Task 3

Design an ecosystem and determine the producers, consumers and decomposers

Soil and water---- non living organisms
Bean Plants --------------- producers
Beetles------------------ Consumers
Earthworms----------------- decomposers
Dead leaved---------------- Dead organisms

Task 4 the theory of building pyramids

Explain how the sand was used to move very large blocks of stones from the point of view of scientists and historians

Historians

Historians have looked at one of the ancient Egyptians wall paintings that shows how did they move a huge statue across the desert sands and found a person pouring a liquid from a jar in front of the sled. Historians believed that this was related to a holy ceremony

Scientists

They looked at the same painting in a different way. Scientists has a theory that may be ancient Egyptians were adding water to the sand to make the sand more slippery so they could move the huge statue more easily due to the decrease in the friction force

Task 5 Discussing the research steps

Does adding water to the sand make the sand more slippery?

Hypothesis/ Claim

Adding water to the sand makes it more slippery and has the ability to move big stones

Evidence

- **Steps**

1- Put a big wooden box on a dried sand and tie it with a ribbon
2- Try to pull the wooden box above the sand and record your results
3- Add water to the sand and repeat the experiment and record your results

- **Observation**

Sand particles are rough but when water is added to sand this made the sand particles come close and stick together

We were able to move the wooden box more easily when we added water to the sand

- **Conclusion**

Adding water to sand makes it more slippery so it can be used to move large blocks of stones such as the pyramids stones

Model (1)

Owls in food chains

Owls have some environmental adaptations that enable them to easily capture prey and obtain food.

Answer the following;

1-From structural adaptation in owls ....

a- Strong sense of sight b- weak sense of sight

2- The owl is found in the ....part of the food chains.

a-lower b- higher

3-The owls are from .... in the food chains.

a-producers b- consumers

4- Create a food chain containing owls and include at least four organisms of different species.

Model (2)

The effect of climate change on the ecosystems

Global warming is one of the phenomena that pose a threat to the manifestations of life on the surface of the earth and cause severe climatic changes such as droughts and floods, which threaten life in many ecosystems.

Answer the following:

1 The gas, which responsible for the global warming is..........

a-oxygen b- carbon dioxide gas

2- The melting of ice leads to a rise in sea and ocean levels, and this is an example of the ....change

a-physical b-chemical

3- It is a non-living element in the ecosystem that is not considered

a basic need for plant seed germination.

a-soil b-air

4- In your opinion, how droughts lead to the destruction of food chains in the ecosystem?

Model (3)

Aquaculture

-From article of Al-Ahram newspaper;



-Hydroponics saves 59 % of irrigation water and challenges pests without pesticides.

-In Egypt, during the past few years, the idea of hydroponics or farming without soil has spread on a limited scale in many cities in the governorates.

-Probably, many do not know that cultivation without soil is one of the hydroponics systems for the production of leafy vegetables free of diseases and pesticides.

-It means that Cultivation of plants in agricultural media where soil is not one of its components, and it was fed using a special solution that contains the nutrients necessary for plant growth.

Answer the following:

1- Hydroponics is one of the modern methods of agriculture and direct evidence that the soil is one of the............

a- Basic needs of a plant.
b- Non-basic needs of the plant.

2-The plant gets ....from soil.

a-carbon dioxide gas b-water and nutrients

3- What is the importance of the oxygen gas that is produced by photosynthesis process, which is carried out by the plant to make its own food?

....

....

4- Mention some of the advantages of hydroponics that you have learned from the article.

....

Model (1)

Owls in food chains

Q1: Owls have some environmental adaptations that enable them to easily capture prey and obtain food.

Answer the following:



1. From structural adaptation in owls ....
   a. Strong sense of sight
   b. weak sense of sight

2. The owl is found in the .... part of the food chains.
   a. Lower   b. higher

3. The owls are from .... in the food chains.
   a. producers   b. consumers

4. Create a food chain containing owls and include at least four organisms of different species.

   plant → insect → jerboa → snake → owl

Model (2)

The effect of climate change on the ecosystems

Q1: Global warming is one of the phenomena that pose a threat to the manifestations of life on the surface of the earth and cause severe climatic changes such as droughts and floods, which threaten life in many ecosystems.



Answer the following:

1. The gas, which responsible for the global warming is ……………………………
    a. Oxygen
    b. carbon dioxide gas

2. The melting of ice leads to a rise in sea and ocean levels, and this is an example of the ………………………… change.
    a. Physical   b. chemical

3. It is a non-living element in the ecosystem that is not considered a basic need for plant seed germination.
    a. Soil   b. air

4. In your opinion, how droughts lead to the destruction of food chains in the ecosystem?
    - **Because droughts make the plants die so, the other organisms will die too.**



Model (3)

Aquaculture

-From article of Al-Ahram newspaper;

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-In Egypt, during the past few years, the idea. Of hydroponics or farming without soil has spread on a limited scale in many cities in the governorates.

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2. The plant gets ………………… from soil.
   a. carbon dioxide gas   b. water and nutrients

3. What is the importance of the oxygen gas that is produced by photosynthesis process, which is carried out by the plant to make its own food?
   - **It is used by humans and animals for respiration.**

4. Mention some of the advantages of hydroponics that you have learned from the article.
   1- **Saving 59% of irrigation water.**
   2- **Getting rid of pests without pesticides.**
   3- **Production of leafy vegetables free of diseases and pesticides.**
   4- **No need for soil.**